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LOS ANGELES TIMES
23 NOVEMBER 1982

'Dense Pack' Plan Reverses Missile Theory

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WASHINGTON—President Reagan's plan for deploying the MX missile, the so-called "dense pack" or "closely spaced basing," is the most efficient and effective system available and can be counted on to deter attack by the Soviet Union, Pentagon officials said Monday.

But the whole $26-billion, seven-year MX proposal rises or falls on an untested, and ultimately untestable, theory called "fratricide"—a theory that is exactly the opposite of virtually all previous ideas about how to protect nuclear missiles from enemy attack.

In an attack, proponents of the fratricide thesis say, the torrent of arriving Soviet missiles would set off such a nuclear inferno that most would destroy one another while most of the MX missiles, deep in their super-hardened silos, would survive.

Tower Defends Plan

Although admitting to "obvious uncertainties" about dense pack, Sen. John G. Tower (R-Tex.), chairman of the Senate Armed Services Committee, said it "is based on the best scientific knowledge. There is nothing in the Soviet inventory that can defeat this system."

No nuclear firestorm can be set off to test the fratricide theory, of course, but in the arcane world of nuclear weapons theory, both supporters and opponents of the dense pack approach cite the uncertainties as proof that their side is correct.

Broadly speaking, opponents argue that it makes no sense to pour billions of precious tax dollars into a basing system that may be extremely vulnerable to Soviet attack.

"It's just dumb to start down this road without knowing where we're going," said IBM physicist Richard Garwin, a longtime Pentagon consultant. And Stansfield Turner, CIA director in the Carter Administration, declared recently that the discussion of dense pack "is about as realistic as the proverbial monastic debates about how many angels can be carved on the head of a pin."

MX opponents note that the dense-pack concept is a reversal of the long-standing belief that missile silos are safest from attack when they are spaced as far apart as feasible.

To date, all of this country's strategic missiles have been so deployed because it was believed that Moscow would never have enough missiles of sufficient accuracy to be sure of wiping out all the scattered American silos. And, so long as a retaliatory strike by the United States was possible, deterrent theory held, the Soviets would not dare risk a first strike.

Reversing Old Concept

Supporters of dense-pack acknowledge that they are reversing the old concept, but they argue that the increasing accuracy of both U.S. and Soviet intercontinental ballistic missiles has made the traditional approach obsolete.

Isolated missile silos will become easy to pick off in the years ahead, Pentagon analysts say; and bunching missile silos close together, to take advantage of possible "fratricide" effects, is now a better bet.

And, although conceding that they cannot be sure of their theory, MX backers say that this very uncertainty is one of the chief reasons the MX will deter the Kremlin.

The essence of deterrence, officials stressed at a Pentagon briefing Monday, is to convince a would-be attacker that the risks of an assault outweigh the advantages. Soviet strategic planners contemplating an attack against the MX, Administration officials said, could not be certain of wiping out enough U.S. missiles to prevent retaliation.

According to a report on dense pack by the Defense Intelligence Agency, the Soviets would be deterred by not knowing whether an attack would succeeed. The Soviets, the agency concluded, "would not rely on analytical simulation or poorly understood nuclear effects" in staking their lives on a do-or-die attack.

Berkeley Report Cited

Thus, the Administration cites as scientific support for dense pack a report by Dr. Charles Townes, of the University of California-Berkeley, which concluded not that dense pack would actually work but that the Soviets could have no "confidence" in attacking it.

The crux of the Administration's case for dense pack is that, even though some confusion surrounds whether the theories will work, there is more confusion on the Soviet side than on the American side.

"We've been studying the hell out of fratricide for 20 years," said a senior Pentagon official who briefed reporters on the understanding that he not be identified.

"Look, we're building a deterrent force here," the official said. "He (the Soviet strategist) is going to have to react to this. He's faced with a terrible uncertainty. Sure, there are things he can do, but there are things we can do to make this system better.

"The bottom line is that it's going to be much more advantageous for him to sit down at the conference table and talk arms reductions," the official said.

Primary Uncertainty

The primary uncertainty about dense pack is not whether incoming Soviet missiles would be harmlessly detonated or deflected from their targets by the blasts and nuclear effects of the Soviet warheads that preceded them. Physicists appear to generally accept the notion that the radiation, debris and fireball caused by the first Soviet missile would probably deflect or destroy missiles that arrived just behind.

But the experts disagree sharply over the tactics the Soviets might follow to defeat these effects. In one scenario, Soviet planners could "pin down" the MX missiles—prevent them from being fired in retaliation—by exploding one warhead after another in the air above the MX site.

But such strategems are themselves unknowns, although the Pentagon assessment is that the Soviet Union does not now possess the technology to achieve such accuracy and pinpoint timing.

Another unknown about the dense pack concept is whether the Air Force can really build silos that are strong enough to withstand even a partially deflected Soviet attack. Defense officials said Monday that, if the silos were built of six- to eight-foot-thick walls of concrete with steel mesh, each could withstand a blast creating a pressure of 15,000 pounds per square inch.

In short, the Soviets could knock out one MX silo with a direct hit from a 25-megaton warhead—their largest—but

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